AMENDED CLAIM SET:

1. (currently amended) A carrier component suitable as an olefin polymerization catalyst, which is insoluble in a hydrocarbon solvent, is in the form of a solid fine particles having an average particle diameter of 3 to 80 μm, and contains a magnesium atom, an aluminum atom and a C_{1-20} alkoxy group simultaneously, wherein the molar ratio of magnesium atom to aluminum atom (Mg/Al) is in the range of 40 to 150 ~~1.0 to 300~~, and the molar ratio of alkoxy group to aluminum atom (alkoxy group/Al) is in the range of 0.2 to 2.0 ~~0.05 to 2.0~~.

2. (original) The carrier component according to claim 1, wherein the molar ratio of magnesium atom to aluminum atom (Mg/Al) is in the range of 40 to 150, and the molar ratio of alkoxy group to aluminum atom (alkoxy group/Al) is in the range of 0.2 to 2.0.

3. (previously presented) The carrier component according to claim 1, which is obtained by contacting a magnesium halide with a C_{1-20} alcohol and then contacting the product with an organoaluminum compound represented by the general formula (Z):

$$AlR_nX_{3-n} \qquad (Z)$$

wherein R represents a C_{1-20} hydrocarbon group, X represents a halogen atom or a hydrogen atom, n is an integer of 1 to 3, and when there are a plurality of Rs, Rs may be the same or different, and when there are a plurality of Xs, Xs may be the same or different.

4. (withdrawn) An olefin polymerization catalyst comprising the carrier component described in claim 1.

5. (withdrawn) An olefin polymerization catalyst comprising:

(A) a transition metal compound from any one of groups 3 to 11 in the periodic table, having a ligand containing two or more atoms selected from a boron atom, a nitrogen atom, an oxygen atom, a phosphorous atom and a sulfur atom,

(B) a carrier component suitable as an olefin polymerization catalyst, which is insoluble in a hydrocarbon solvent, is in the form of a solid fine particles having an average particle diameter of 3 to 80 μm, and contains a magnesium atom, an aluminum atom and a C_{1-20} alkoxy group simultaneously, wherein the molar ratio of magnesium atom to aluminum atom (Mg/Al) is in the range of 1.0 to 300, and the molar ratio of alkoxy group to aluminum atom (alkoxy group/Al) is in the range of 0.05 to 2.0, and

(C) a specific organometallic compound, if necessary.

6. (withdrawn) The olefin polymerization catalyst according to claim 5, wherein the transition metal compound (A) is carried on the carrier component (B).

7. (withdrawn) A polyolefin having a bulk density of 0.20 (g/cm^3) or more, which is obtained by homopolymerizing or copolymerizing an olefin in the presence of the olefin polymerization catalyst described in clam 4.

8. (withdrawn) The olefin polymerization catalyst according to claim 5, wherein the molar ratio of magnesium atom to aluminum atom (Mg/Al) is in the range of 40 to 150, and the molar ratio of alkoxy group to aluminum atom (alkoxy group/Al) is in the range of 0.2 to 2.0.

9. (withdrawn) The olefin polymerization catalyst according to claim 5, which is obtained by contacting a magnesium halide with a C_{1-20} alcohol and then contacting the product with an organoaluminum compound represented by the general formula (Z):

$$AlR_nX_{3-n} \qquad (Z)$$

wherein R represents a C_{1-20} hydrocarbon group, X represents a halogen atom or a hydrogen atom, n is an integer of 1 to 3, and when there are a plurality of Rs, Rs may be the same or different, and when there are a plurality of Xs, Xs may be the same or different.